YURK., Yu.Yu.; RYABOKON', S.M.; SHNYUKOV, Ye.F.

Microhardness of minerals of iron ores from the Krivoy Rog Basin.
Geol.zhur. 16 no.1:65-69 '56. (MLRA 9:8)
(Krivoy Rog Basin--Iron ores)

YURK, Yu. Yu.

USSR/Cosmochemistry. Geochemistry. Hydrochemistry. D

Abs Jour : Ref Zhur - Khimiya, No. 8, 1957, 26511.

Author : Yurk, Yu.Yu.; Shnyukov, E.F.

Inst :

Title : To The History of Discovery of Martite.

Orig Pub : Geologichniy zh., 1956, 16, No. 3, 87 - 88.

Abstract : No abstract.

Card 1/1

YURK, YU. YU.

USSR

Card [illegible]

Authors : [illegible]

Title : [illegible]

Periodical : [illegible]

Abstract : [illegible] their formation, as well [illegible]

Submitted : .....

YURK, Yu.Yu.

On sedimentary carbonates of the upper layers of the Krivoy Rog series. Dokl.AN SSSR 107 no.3:459-462 Mr '56. (MLRA 9:7)

1.Institut geologicheskikh nauk Akademii nauk USSR. Predstavleno akademikom N.M.Strakhovym.
(Krivoy Rog--Carbonates (Mineralogy))

Yurk, Yu. Yu.

Hydration of iron oxides and their conversion to hydroxides. Yu. Yu. Yurk. *Doklady Akad. S.S.S.R.* 109, 144-7 (1956).—There are contradictory opinions on the stability of $Fe_2O_3$ (as hematite and martite) and magnetite near the surface. The weathering cores of the Krivoi Rog deposits, however, show a strong hydration of $Fe_2O_3$ as well as of magnetite to limonite ores, and, in a lower degree the martitic oxidation products of the primary magnetite ores, down to 300- to 400-m. depth. A study of numerous polished sections of the limonitic brown ore shows relict magnetite. Martite shows a great local variability in all stages of the hydration. Often the martitic network is preserved while the magnetite is nearly completely changed to goethite, rarely to hydrogoethite or lepidocrocite. Pyrite inclusions occasionally occur in the brown Fe ore, evidently as a secondary formation. Oxidation waters containing $H_2SO_4$ (pH about 8) may participate in the hydrolysis; the $FeSO_4$ solns. may be reduced and pptd. by $H_2S$ to pyrite, assocd. with limonite. The sintered forms of many oxidized ores may indicate the action of humins, as well as their cementing effect in the massive goethite ores.

W. Eitel

YURK, Yu.Yu.; SHNYUKOV, Ye.F.

Tourmaline from granitoids of the Dereevka village. Min.sbor. no.11:265-272 '57. (MIRA 13:2)

1. Institut geologicheskikh nauk AN USSR, Kiyev.
(Dniper Valley--Tourmaline)

YURK, Yu.Yu.

Geological age of Krivoy Rog metamorphic series as related to the discoveries of residual plants in its rocks. Visnyk AN URSR 28 no.6:65-67 Je '57. (MIRA 10:8)
(Krivoy Rog--Rocks, Crystalline and metamorphic)

YURK, Yu. Yu.

AYZENVERG, D.Ye., geolog; BALUKHOVSKIY, N.F., geolog; BARTOSHEVSKIY, V.I., geolog; BASS, Yu.B., geolog; VADIMOV, N.T., geolog; GLADKIY, V.Ya., geolog; DIDKOVSKIY, V.Ya., geolog; YERSHOV, V.A., geolog; ZHUKOV, G.V., geolog; ZAMORIY, P.K., geolog; IVANTISHIN, M.N., geolog; KAPTARENKO-CHERNOUSOVA, O.K., geolog; KLIMENKO, V.Ya., geolog; KLUSHIN, V.I., geolog; KLYUSHNIKOV, M.N., geolog; KRASHENINNIKOVA, O.V., geolog; KUTSYBA, A.M., geolog; LAPCHIK, F.Ye., geolog; LICHAK, I.L., geolog; MAKUKHINA, A.A., geolog; MATVIYENKO, Ye.M., geolog; MEDYNA, V.S., geolog; MOLYAVKO, G.I., geolog; NAYDIN, D.P., geolog; NOVIK, Ye.O., geolog; POLOVKO, I.K., geolog; RODIONOV, S.P., geolog; SEMENENKO, N.P., akademik, geolog; SERGEYEV, A.D., geolog; SIROSHTAN, R.I., geolog; SLAVIN, V.I., geolog; SUKHAREVICH, P.P., geolog; TKACHUK, L.G., geolog; USENKO, I.S., geolog; USTINOVSKIY, Yu.B., geolog; TSAROVSKIY, I.D., geolog; SHUL'GA, P.L., geolog; YURK, Yu.Yu., geolog; YAMNICHENKO, I.M., geolog; ANTROPOV, P.Ya., glavnyy redaktor; FILIPPOVA, B.S., red. izd-va; GUROVA, O.A., tekhn.red.

[Geology of the U.S.S.R.] Geologiia SSSR. Glav. red. P.IA.Antropov. Vol.5.[Ukrainian S.S.R., Moldavian S.S.R.] . . Ukrainskaia SSR, Moldavskaia SSR. Red. V.A. Ershov, N.P. Semenenko. Pt.1.[Geological description of the platform area] Geologicheskoe opisanie platformennoi chasti. Moskva, Gos. nauchno-tekhn.izd-vo lit-ry po geol. i okhrane nedr. 1958. 1000 p. [___ Supplement] ___Prilozheniia.

(Continued on next card)

AYZENVERG, D.Ye.---(continued) Card 2.
3 fold.maps (in portfolio) (MIRA 12:1)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye geologii i okhrany nedr. 2. Ukrainskoye geologicheskoye upravleniye Ministerstva geologii i okhrany nedr SSSR i Institut geologicheskikh nauk Akademii nauk USSR (for all except Antropov, Filippova, Gurova). 3.Glavnyy geolog Ukrainskogo geologicheskogo upravleniya (for Yershov). 4. AN Ukrainskoy SSR (for Semenenko).

(Ukraine--Geology) (Moldavia--Geology)

YURK, Yu.Yu. [IUrk, IU.IU.]; SHNYUKOV, Ye.F. [Shniukov, IE.F.]

Psilomane from the Kanysh-Burun deposits [with summary in English]. Dop.AN URSR no.12:1349-1353 '58. (MIRA 12:1)

1. Institut mineral'nykh resursov AN USSR. Predstavil akademik AN USSR N.P.Semenenko [M.P.Semenenko]
(Kerch--Psilomane)

YURK, Yu.Yu.; SHNYUKOV, Ye.F.

Mechanical twinning of hematite. Zap. Vses. min. ob-va 87 no.1: 108-112 '58. (MIRA 11:6)

1. Institut geologicheskikh nauk AN USSR.

(Hematite)

YURK, Yu.Yu.

Origin of magnetite in ferruginous rocks of the Kirvoy Rog Basin.
Zap. Vses. min. ob-va 87 no.3:370-373 '58. (MIRA 11:10)
(Krivoy Rog Basin--Magnetite)

YURK, Yu.Yu., prof.; SHNYUKOV, Ye.F., kand.geologo-mineralogicheskikh nauk;
LEBEDEVA, A.D.

So-called quartz aureoles surrounding magnetite crystals in rocks of Krivoy Rog iron ore stratum. Sbor. nauch. trud. NIGRI no.2: 244-252 '59. (MIRA 14:1)
(Krivoy Rog Basin--Petrology)

YURK, Yu.Yu.; SHNYUKOV, Ye.F.; LEBEDEV, Yu.S.; KIRICHENKO, O.N.; SEMENENKO, N.P., akademik, otv.red.; ISUPOVA, N.I., tekhn.red.

[Mineralogy of iron ore formation in the Kerch Basin] Mineralogiia zhelezorudnoi formatsii Kerchenskogo basseina. Simferopol', Krymizdat, 1960. 449 p. (MIRA 13:12)

1. AN USSR (for Semenenko).
(Azov Sea region--Iron ores)

YURK, Yu.Yu.; RYABOKON', S.M.; SHNYUKOV, Ye.F. [Shniukov, IE.F.]

Tourmaline of the Ukrainian Crystalline Shield. Trudy Inst.
geol.nauk AN URSR. Ser.petr.,min. ta geokhim. no.6:5-30
'60. (MIRA 15:12)

(Dnieper Valley--Tourmaline)

YURK, Yu.Yu.

Processes of the formation of martite in rocks and ores of the Krivoy Rog Basin. Trudy Inst.geol.nauk AN URSR. Ser.petr.,min. ta geokhim. no.6:58-80 '60. (MIRA 15:12)
(Krivoy Rog Basin—Martite)

YURK, Yu.Yu.; LEBEDEVA, A.D. [Lebedieva, A.D.]

Gypsum crystals of Pliocene sediments in Tarutino District.
Trudy Inst.geol.nauk AN URSR. Ser.petr.,min. ta geokhim.
no.6:178-184 '60. (MIRA 15:12)
(Tarutino District—Gypsum crystals)

YURK, Yu.Yu.; SHNYUKOV, Ye.F. [Shniukov, IU.F.]; KHAIM, T.P.

New finds of iron sulfate in the Kerch and Taman' iron ore deposits.
Dop.AN URSR no.9:1271-1276 '60. (MIRA 13:10)

1. Institut mineral'nykh resursov AN USSR. Predstavleno akademikom
AN USSR N.P.Semenenko.
(Crimea—Iron sulfate)

YURK, Yuriy Yur'yevich; SHNYUKOV, Yevgeniy Fedorovich; SEMENENKO, N.P., akademik, otv. red.; CHEKHOVICH, N.Ya., red.; DAKHNO, Yu.M., tekhn. red.

[Iron oxides in the Ukrainian Crystalline Shield] Okisly zheleza ukrainskogo kristallicheskogo shchita. Kiev, Izd-vo Akad. nauk USSR, 1961. 107 p. (MIRA 15:1)

1. Akademiya nauk USSR (for Semenenko).
(Dnieper Valley--Iron oxides)

YURK, Yu.Yu.; SHNYUKOV, Ye.F, [Shniukov, IE.F.]

Genertic role of pseudo-oolite in the history of ore formation in the Cimmerian iron ore basin. Mat.z min.Ukr. no.2:3-11 '61. (MIRA 15:8)

(Azov Sea region--Iron ores) (Black Sea region--Iron ores)

YURK, Yu. Yu.; MARCHENKO, Ye.Ya.; GONCHAROVA, Ye.I.

Britholite from crystalline rocks in the eastern part of the Sea
of Azov region (Ukrainian S.S.R.). Dokl. AN SSSR 137 no.4:947-
950 Ap '61. (MIRA 14:3)

1. Institut mineral'nykh resursov AN USSR. Predstavleno
akademikom D. I. Shcherbakovym.
(Kal'chik Valley--Britholite)

LEBEDINSKIY, Vladimir Ivanovich; MAKAROV, Nikolay Nikolayevich; YURK, Yu.Yu., doktor geol.-miner. nauk, otv. red.; CHEKHOVICH, N.Ya., red. izd-va; RAKHLINA, N.P., tekhn. red.

[Volcanism of the Crimean Mountains]Vulkanizm Gornogo Kryma. Kiev, Izd-vo Akad. nauk USSR, 1962. 206 p. (MIRA 15:12)
(Crimean Mountains--Volcanoes)

YURK, Yu.Yu., doktor geol.-miner. nauk, prof., otv. red.; GOROSHNIKOV, B.I.[Horoshnykov, B.I.], kand. geol.-miner. nauk, red.; KARASIK, M.A.[Karasyk, M.A.], kand. geol.-miner. nauk, red.; KORNILOV, M.O.[Kornylov, M.O.], kand. geol.-miner. nauk, red.; LEBEDINSKIY, V.I. [Lebedyns'kyi, V.I.], kand. geol.-miner. nauk, red.; SHTUL'MAN, I.F., red.; DAKHNO, Yu.B., tekhn. red.

[Mineralogy and geochemistry of the southeastern part of the Ukrainian S.S.R.] Mineralogiia i geokhimiia pivdenno-skhidnoi chastyny URSR. Kyiv, Vyd-vo AN Ukr.RSR, 1963. 148 p. (MIRA 17:1)

1. Akademiya nauk URSR, Kiev.

TKACHUK, V.G., doktor geol.-miner. nauk, otv. red.; YURK, Yu.Yu., doktor geol.-min. nauk, red.; IVANOV, B.N., kand. geogr. nauk, red.; GOLOVTSYN, V.N., doktor geol.-min. nauk, red.; VOINSTVENSKIY, M.A., doktor bio.. nauk, red.; SHUL'TS, P.N., kand. ist. nauk, red.; DUBLYANSKIY, V.N., kand.geol.min. nauk, red.; SERDYUK, O.P., red.izd-va; TURBANOVA, N.A., tekhn. red.

[Transactions of the Joint Karst Expedition] Trudy Kompleksnoi karstovoi ekspeditsii. No.1.[Studying karst in the Crimea] Issledovaniia karsta Kryma. 1963. 170 p. (MIRA 17:3)

1. Akademiya nauk URSR, Kiev. Kompleksnaya karstovaya ekspeditsiya.

KARASIK, Mikhail Abramovich; YURK, Yu.Yu., doktor geol.-miner. nauk, otv. red.; ZERNETSKAYA, N.V., red.; MATVEYCHUK, A.A., tekhn. red.

[Postmagmatic ore zones and their classification] Poslemagniticheskie rudnye polia i ikh klassifikatsiia. Kiev, Izd-vo AN Ukr.SSR, 1963. 265 p. (MIRA 16:8)
(Ore deposits--Classification)

YURK, Yu.Yu.; KORNILOV, N.A.; KIRICHENKO, O.N.; LEBEDEV, Yu.S.

Outlines of the Cimmerian iron ore basin in the southern part the U.S.S.R. Dokl. AN SSSR. 154 no.2:355-358 Ja'64.
(MIRA 17:2)

1. Institut mineral'nykh resursov AN UkrSSR. Predstavleno akademikom D.I. Shcherbakovym.

GOROSHNIKOV, B.I.; DZHUN', V.S.; KUKOLEV, G.V.; MARCHENKO, Ye.Ya.;
SKOMAROVSKAYA, L.A.: CHASHKA, A.I.; SHCHUKAREVA, L.A.;
YURK, Yu.Yu., doktor geol.-miner. nauk, prof.; YUR'YEV,
L.D.; SERDYUK, O.P., red.

[Granitoid rocks in the Azov Sea region and prospects for using them in the ceramic and glass industries] Granitoidnye porody Priazov'ia i perspektivy ikh ispol'zovaniia v keramicheskom i stekol'nom proizvodstvakh. Pod red. Iu.Iu. Iurka. Kiev, Naukova dumka, 1964. 142 p. (MIRA 17:9)

1. Akademiya nauk URSR. Kiev. Instytut mineral'nykh resursiv.

YURK, Yu.Yu.; KASHKAROV, I.F.; POLKANOV, Yu.A. [Polkanov, IU.O.]; SIZOVA, R.G.
[Syzova, R.H.]

Moissanite from the Tertiary titaniferous sands of the Azov Sea region. Dop. AN URSR no.11:1517-1519 '65.
(MIRA 18:12)

1. Institut mineral'nykh resursov AN UkrSSR.

NALIVKIN, D.V. [Nalyvkin, D.V.], glav. red.; BELYAYEVSKIY, N.A. [Bieliaievs'kyi, M.A.], zam. glav. red.; TIKHOMIROV, V.V. [Tykhomyrov, V.V.], zam. glav. red.; ASSOVSKIY, A.N. [Assovs'kyi, O.M.], red.; MEL'NIKOV, O.D.[Mel'nykov, O.D.], red. [deceased]; PEYVE, A.V. [Peive, O.V.], red.; YANSHIN, A.L.[IAnshyn, O.L.], red.; MALAKHOVSKIY, V.F.[Malakhovs'kyi, V.F.], red. vypuska; YURK, Yu.Yu., prof.,red.; MESYATS,Y.A. [Misiats', I.O.], red.; BASS, Yu.B. red.; MALAKHOVSKIY, V.F. [Malakhovs'kyi, V.F.], red.; NEKRASOV, G.I.[Nekrasov, H.I.], red.; SLAVUTSKIY, M.B.[Slavuts'kyi, M.B.], red.;NIKITENKO, E.I., red.

[Study of the geology of the U.S.S.R.] Geologicheskaia izuchennost' SSSR. Kiev, Naukova dumka. Vol.33. No.1. 1965. 68 p. (MIRA 18:6)

STASHCHUK, Mikhail Fedorovich; SUPRYCHEV, Vladimir Andreyevich;
KHITRAYA, Mariya Stepanovna; YURK, Yu.Yu., doktor geol.-
miner. nauk, otv. red.; CHEKHOVICH, N.ya., red.

[Mineralogy, geochemistry, and conditions governing the formation of the bottom sediments of Sivash] Mineralogiia, geokhimiia i usloviia formirovaniia donnykh otlozhenii Sivasha. Kiev, Naukova dumka, 1964. 172 p.
(MIRA 18:1)

EGERT, V.E.; YURKA, A.A.

Colorimetric determination of free alkalies and acids in the preparations barbamyl and sodium ethaminal. Apt. delo. 11 no.5: 43-47 S-O '62. MIRA 17:5)

1. Institut organicheskogo sinteza AN Latviyskoy SSR.

YURKA, A. D.

1. LOGVINOV, D. D., YURKA, A. D.
2. USSR (600)
4. Horses - Diseases
7. Using norsulfazole in postnatal complications in mares, Konevodstvo 23 No. 2, 1953

9. Monthly List of Russian Accessions, Library of Congress, May 1953, Uncl.

1. YURKAVICHYUS, V. I., MAISURA, D. S.

2. USSR (600)

4. Nets

7. Cooperation of Scientific workers and fishermen. Ryb. khoz. 28 no. 9, 1952

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

ACC NR. AR[illegible] SOURCE CODE: UR/0276/66/000/009/V032/V032

AUTHOR: Aryshenskiy, Yu. M.; Shil'meyster, B. D.; Fedorova, T. M.; Yurkenik, T. A.

TITLE: Problems related to wrapping VT1-2 and OT4-1 titanium alloys

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya, Abs. 9V235

REF SOURCE: Tr. Kafedry proiz-va letatel'n. apparatov. Kuybyshevsk. aviats. in-t, vyp. 20, ch. 2, 1965, 55-59

TOPIC TAGS: titanium alloy, material deformation, mechanical properties, wrap forming, jacketing

ABSTRACT: A study was made of the maximum permissible amount of deformation of billets at which maximum strain hardening does not affect the initial mechanical properties of the material. The samples were exposed to stretching prior to obtaining 2, 3, 5, 10, 12 and 15% of the residual elongation, after which the experimental data were correlated with those obtained by calculation. It was determined that in work-hardening by tension up to 5—5%, the mechanical proper-

Cord 1/2 UDC: 621.981.011

ACC NR: AR7004885

ties of the specimen remain within the limits of the specifications, and that parts can be manufactured from these materials by wrap-forming without subsequent annealing. A study was made of the effect of changes in the mechanical properties due to deformation by stretching and the changes in the permissible amount of thinning and narrowing of the material on the overall amount of deformation by wrapping. Orig. art. has: 3 figures. S. Shirman. [Translation of abstract]

SUB CODE: 11, 13/

[AM]

Card 2/2

YURKEVICH, A.

Take active part in the management of public organizations. NTO 3 no.11:45-46 N '61. (MIRA 14:10)

1. Zamestitel' predsedatelya Ukrainskogo respublikanskogo soveta Nauchno-tekhnicheskikh obshchestv.
(Ukraine—Technical societies)

TOPCHIYEVA, K.V.; RAKHOVSKAYA, S.M.; KUCHKAYEVA, I.K.; SHAMINA, I.S.;
YURKEVICH, A.A.

Modifications of the supporting structure of phosphoric acid catalysts in the ethylene hydration process. Neftekhimiia 3 no.2:271-275 Mr-Ap '63. (MIRA 16:5)

1. Saratovskiy gosudarstvennyy universitet imeni N.G.Chernyshevskogo, Nauchno-issledovatel'skiy institut khimii, Moskovskoy gosudarstvennyy universitet imeni Lomonosova i Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

(Phosphoric acid) (Ethylene) (Hydration)

U S R

[illegible]

heat evolution; length of heating (on [illegible] after until unless otherwise stated), and % yield given: MeCH(NHAc)·

[illegible]

KOST, A.N.; YURKEVICH, A.M.

Acetylation of amines and hydrazines with vinylacetate. Vest.Mosk.un. 8 no.2:69-75 F '53. (MLRA 6:5)

1. Kafedra organicheskoy khimii. (Acetylation) (Amines) (Hydrazines)

YURK[illegible]

USSR

6

[illegible] of ethyl acetate [illegible]

[illegible] pyridine SO[illegible] acetate (I) was added 5 g. of [illegible]

[illegible] of the [illegible] from [illegible] and a [illegible]

1/2

Chemical Abst.
Vol. 48 No. 8
Apr. 25, 1954
Organic Chemistry

10

5

Sulfonation and sulfonic acids of acidophobic substances XXII. Sulfonation of vinyl ethers. A. P. Terent'ev, A. N. Kost, A. M. Yurkevich, and E. E. Khaskina (Moscow State Univ.). *Zhur. Obshchei Khim.* 23, 746-53(1953); cf. *C.A.* 48, 3339b.—Heating 5 g. 25% soln. of $CH_2:CHCl$ in $(CH_2Cl)_2$ and 6 g. pyridine-$SO_3$ in an ampul 1.5-2 hrs. at 170°, soln. in $H_2O$, neutralization with $BaCO_3$, steam distn. of the pyridine, filtration of the residue, treatment of the filtrate with C, concn., addn. of MeOH, and extn. of the product with hot EtOH for 3 days gave 5% *$(HCOCH_2SO_3)_2Ba$* (I), formed apparently from the primary product $CH_3.CHCl.O.SO_2.O.Ba.O.SO_2$. Similar reaction of $Me_2C:CHBr$ gave after 6 hrs. at 110° 85% *Ba salt of 2-sulfoisobutyraldehyde* (II), which reduces ammoniacal $AgNO_3$; *Pb salt*, sirup; *Ag salt*, insol. in $H_2O$. $CH_2:CHOBu$ (2 g.), 3.2 g. pyridine-$SO_3$ and 6 ml. $(CH_2Cl)_2$ heated 9 hrs. at 70-90° and treated as above, gave 30% I, forming a *monohydrate* on crystn. from $H_2O$; refluxing the reactants 14 hrs. gives a 32.5% yield; use of dioxane-$SO_3$ gives 42%. I with S-2-naphthylthiuronium chloride gave the *S-2-naphthylthiuronium salt*, m. 202-4° (from $C_6H_6$). $CH_2:CHOAc$ and pyridine-$SO_3$ in $(CH_2Cl)_2$ gave, after 8 hrs. at 120° and the usual treatment, 85% I; dioxane-$SO_3$ gave 62%. For better isolation of the product and removal of AcOH the product is best refluxed 4 hrs. with 0.2*N* $H_2SO_4$ before treatment with $BaCO_3$. $H_2C:CMeOAc$ (1 g.) added to 1 g. $SO_3$, 6 ml. $(CH_2Cl)_2$, and 9.0 g. dioxane with ice cooling gave 67% *Ba acetonesulfonate monohydrate.* Refluxing 28.8 g. iso-PrCHO, 61 g. $Ac_2O$ and 6 g. KOAc 10 hrs. gave 36.5 g. *$Me_2C:CHOAc$*, $b_{754}$ 121-4°, $n^{20}_{D}$ 1.4106, which, heated with pyridine-$SO_3$ 10 hrs. at 150° in an ampul, gave 35% II. $ClHgCH_2CHO$ heated with $SO_3$ in $(CH_2Cl)_2$ 12 hrs. on a steam bath, treated with $H_2O$, freed of Hg salts with $H_2S$, and neutralized with $BaCO_3$, gave 41% *Ba sulfoacetate monohydrate* (from $H_2O$). Addn. of dioxane dibromide (62 g.) to 21.2 g. $CH_2:CHOAc$ with cooling gave 60% *$BrCH_2CHBrOAc$*, $b_{12}$ 101-3°, $n^{20}_{D}$ 1.5057, $d_{20}$ 1.9170, which (2.5 g.) refluxed 1 hr. with 3 g. $Na_2SO_3$ in 25 ml. $H_2O$, concd., treated with $BaCO_3$, filtered, evapd. and treated with S-2-

(over)

Yurkevich, A. M.

Sulfonation and sulfonic acids of acidophobic substances. XVII. The sulfonation of vinyl ethers. A. P. Terent'ev, A. N. Kost, A. M. Yurkevich, and E. E. Khaskina. J. Gen. Chem. U.S.S.R. 23, 779-85(1963)(Engl. translation). Cf. C.A. 48, 4420a H. L. H.

YURKEVICH A. M.

Acylation by means of vinyl acetate. A. [illegible] and A. M. Yurkevich (Moscow State Univ.). ~~[illegible]~~ $=CH.CH.OAc$ (I) can be used as an acylating agent for alcs. in both acid and alk. conditions. Heating 6 g. iso-PrOH, 8.6 g. I and 4 drops $H_2SO_4$ [illegible] hrs. at 100-10° yielded propene and 4 g. iso-PrOAc, $b_{760}$ 87.5-88°, $n_D^{20}$ 1.3718, $d_{20}$ 0.874), for 52% yield. Similarly 8.8 g. [illegible] $Me_2COH$ and 8.6 g. I gave 42% [illegible], b [illegible] 134-5°, $n_D^{20}$ [illegible], $d_{20}$ 0.8742. Allyl alc. (11.6 g.), 17.2 g. I and [illegible] drops $H_2SO_4$ similarly gave 32% $CH_2:CHCH_2OAc$, b [illegible], $n_D^{20}$ 1.4043, $d_{20}$ 0.9272; addn. of I to $CH_2:CHCH_2OH$ even at 0° yields tarry resinous products and the ester could not be isolated. n-Hexanol (10.5 g.) and 8.6 g. I with a little $H_2SO_4$ similarly gave 40% $C_6H_{13}OAc$; [illegible] g. ROH was recovered, but with excess I the yield rises to [illegible] of the product, b [illegible], $n_D^{20}$ [illegible], $d_{20}$ [illegible]. Heating 10.2 g. n-hexanol and 8.6 g. I with 0.2 g. [illegible] in a sealed tube 20 hrs. at [illegible] gave [illegible] g. ROH and [illegible]% $C_6H_{13}OAc$. Al(OEt)$_3$ catalyst in a similar reaction gave but 12% yield of the ester. 3-Hexanol [illegible] g. I with 6-8 drops $H_2SO_4$ heated 3 hrs. at 100-[illegible]° gave [illegible]% $EtPrCHOAc$, b 149-61°, $n_D^{20}$ 1.4051, $d_{20}$ 0.867; [illegible] g. ROH was recovered; on addn. of I to RONa much heat was evolved but no ester was isolated. To 2.3 g. Na in 20 g. cyclohexanol was added at 0° [illegible] g. I [illegible] and sepn. of a ppt. the org. layer yield [illegible] OAc, b 65-7°, $n_D^{20}$ 1.4412, $d_{20}$ [illegible] the recovered alc. is considered [illegible] 8.4 g. I and 6-8 drops $H_2SO_4$ heated [illegible] propanol (10.5 g.) and 8.6 g. I with 6 drops $H_2SO_4$ heated as above gave [illegible] g. ROH and 35% corresponding acetate, b 104-5°, $n_D^{20}$ [illegible] 4081, $d_{20}$ 0.9456. Na (1.1 g.) in 12.2 g. $PhCH_2CH_2OH$ treated at 0° with 8.6 g. I and the mixt. dild. with $Et_2O$ gave 18% $PhCH_2CH_2OAc$, b 110-11°, $n_D^{20}$ 1.5116, $d_{20}$ 1.044. Similarly furfuryl alc. gave 50% acetate, b 83-6°, $n_D^{20}$ 1.4682, $d_{20}$ 1.1117. I (34.4 g.), 24.4 g. BzOH, [illegible] g. $Hg(OAc)_2$, and 3 drops $H_2SO_4$ heated 24 hrs. at 45-50°, 20 g. $Na_2CO_3$ and 50 ml. cold $H_2O$ added, and the org. layer distd. gave 41% $CH_2:CHOBz$, b 93-100°, $n_D^{20}$ 1.5282, $d_{20}$ 1.0853. Similarly $PrCO_2H$ gave 51% $CH_2:CHO_2CPr$, b 115-16°, $n_D^{20}$ 1.4066, $d_{20}$ 0.9066. Heating 2.3 g. $PhNH_2$ and 3.7 g. $CH_2:CHOBz$ with 2 drops $H_2SO_4$ 0.5 hr. at 100-20°, followed by washing with aq. HCl, gave 71% PhNHBz, m. 130-1°. Similarly, $PhNH_2$ and $CH_2:CHO_2CPr$, but without $H_2SO_4$, gave 82% PrCONHPh, m. 92°. It is pointed out that in reactions of I with nucleophilic agents such as amines, the initial reaction is an attack on the carbonyl C, followed by stabilization of the complex by migration of H ion and cleavage of AcH, the ease of acetylation being detd. largely by the nucleophilic nature of the reagent rather than by mobility of the H atom. Since alcs. show decreased nucleophilic character because of H-bonding assocn., the destruction of such assocn. is necessary before acylation. G. M. K.

YURKEVICH, A.M.

SAPIRO, M.M., inzhener; YURKEVICH, A.M., inzhener

How to reduce the production costs of furfurole. Gidroliz. i lesokhim prom.8 no.2:17-18 '55. (MIRA 8:10)

1. Krasnoyarskiy gidroliznyy zavod
(Furaldehyde)

✓ Reaction of vinyl ethers with amines. A. N. Kost, A. M. Yurkevich, [illegible] Yudin, and T. A. Shchegoleva [illegible] Zhur. Obshchei Khim. 25, [illegible] Gen. Chem. U.S.S.R. 25, [illegible] (Engl. translation); cf. C.A. 48, 13402e. Syntheses of 2-methylquinolines from vinyl ethers and amines are described. [illegible] g. [illegible] and [illegible] g. PhNH$_2$.HCl was added [illegible] BuOCH:CH$_2$ and the mixt. heated gradually to 13[illegible] [illegible] hrs. Distn. gave 1.7 g. quinaldine, b. 91-96° (picrate, m. 18[illegible]°), giving traces of PhNH$_2$. The same yield [illegible] after 20 days in sealed tube at room temp. When [illegible] of [illegible] was used instead of PhNH$_2$.HCl the yield was [illegible]; BF$_3$.Et$_2$O catalyst gave 36% yield. When 18.6 g. PhNH$_2$, 10 g. BuOCH:CH$_2$, 0.6 g. PhNH$_2$.HCl, and 40 ml. dioxane were heated 20 hrs. on a steam bath, then acidified, steam distd. to remove the solvent and BuOH, and the residue made alk. and steam distd. again, there was obtained 46% quinaldine [illegible] 57%; [illegible] with ZnCl$_2$ gives 34% yield. [illegible] the same yield, [illegible] the yield was only 33%. [illegible] and [illegible] gave 40% quinaldine. PhNH$_2$ and iso-BuOCH:CH$_2$ gave 35% quinaldine. Heating 21.4 g. p-MeC$_6$H$_4$NH$_2$, 10 g. BuOCH:CH$_2$, and 0.5 g. p-MeC$_6$H$_4$NH$_2$.HCl in sealed tube [illegible] at 100° gave 74% crude 2,6-dimethylquinoline, or 41% pure product, b. 118.7°, m. 59.5°; purification with [illegible] steam distn. gave [illegible]% yield. [illegible] the yield, the use of EtOCH:CH$_2$ gave a 30% yield. Heating 21.4 g. o-MeC$_6$H$_4$NH$_2$, 10 g. BuOCH:CH$_2$, and 0.5 g. o-MeC$_6$H$_4$NH$_2$.HCl in 50 ml. dioxane 25 hrs. at reflux gave 60% 2,8-dimethylquinoline; purification with [illegible] gave 40% pure product, while the use of Ac$_2$O gave [illegible] pure material, b. 100-4°; picrate, m. 190-1°. To 13.8 g. [illegible] MeOC$_6$H$_4$NH$_2$, 0.5 g. of its HCl salt, and 50 ml. dioxane was added slowly at reflux over 2 hrs. 10 g. BuOCH:CH$_2$ and the mixt. refluxed 16-18 hrs. to give 15% 2-methyl-6-methoxyquinoline, b. 128-31°, m. 67°; at 90° the yield dropped to 7%; without dioxane no reaction took place. [illegible] 2 C$_{10}$H$_7$NH$_2$ yielded after 25 hrs. at 100° 26% 2-methyl-5,6-benzoquinoline, m. 81-2° (picrate, m. 221°); if an [illegible] proportion of reactants is used, a 2:1 molar ratio gave 7% yield. Refluxing 10.9 g. o-H$_2$NC$_6$H$_4$OH, [illegible] g. [illegible], [illegible] ml. dioxane, and 0.5 g. PhNH$_2$.HCl [illegible] 8-hydroxyquinaldine, m. [illegible] [illegible]. Mixing 9.3 g. PhNH$_2$, [illegible] pyruvic acid, 40 ml. abs. EtOH, and [illegible] g. PhNH$_2$.HCl resulted in vigorous reaction [illegible] after refluxing 12 hrs. the mixture [illegible] [illegible] G. M. Kosolapoff

Halogenation of unsaturated compounds with aromatic diazo compounds. I. Acrylonitrile and the reaction of halogenation. A. V. [illegible], [illegible], and A. A. Yuchenko (State Univ., Moscow). Zhur. Obshchei Khim. 26, 2214-18 (1956); cf. C.A. 51, 7887c.—To 10.6 g. $CH_2:CHCN$ (I), 100 ml. $Me_2CO$, 6 g. $CuCl_2$, and 27 g. NaOAc at 5° was added [illegible] $PhN_2Cl$ from 18.6 g. $PhNH_2$. Vigorous evolution of N was terminated in 1.5-2 hrs. and after diln. with $H_2O$ and extn. with $Et_2O$ there was obtained 36% PhCl and 42.5% $PhCH_2CHClCN$, m. 18-20°, $b_{15}$ 125-40°, and some PhOH [illegible] and $p\text{-}O_2NC_6H_4N_2Cl$ similarly gave 60.5% $p\text{-}O_2NC_6H_4CH_2CHClCN$, m. 110-11°; $m\text{-}O_2NC_6H_4N_2Cl$ gave [illegible] $m\text{-}O_2NC_6H_4CH_2CHClCN$, m. 83-4°, while $o\text{-}O_2NC_6H_4N_2Cl$ gave [illegible] $o\text{-}O_2NC_6H_4CH_2CHClCN$, $b_4$ 166-8°, [illegible] The double salt with $FeCl_3$, prepd. from [illegible] $p\text{-}O_2NC_6H_4NH_2$ by diazotization (cf. [illegible], C.A. [illegible] 4825), [illegible] g. I in $Me_2$ [illegible] followed by [illegible] $H_2O$ gave [illegible] I (10.6 g.), 100 ml. $Me_2CO$, 5 g. [illegible] from 18.6 g. $PhNH_2$ gave 33.5% PhBr and [illegible] $PhCH_2CHBrCN$, [illegible] -14.5°, [illegible] 5710, [illegible] [illegible] material. Similarly $p\text{-}MeC_6H_4$ [illegible] $p\text{-}MeC_6H_4Br$ and 30.2% $p\text{-}MeC_6H_4CH_2$[illegible] [illegible] $p\text{-}O_2NC_6H_4N_2$[illegible] gave 58% $p\text{-}Br$-$C_6H_4NO_2$ and 54% [illegible] $b_2$ [illegible] m. 91.5-9[illegible] Chlorides of [illegible] Zn, and [illegible] did not catalyze the reaction. [illegible] M. Kosolapoff

**YURKEVICH, A.M.** Cand Chem Sci -- (diss) "Utilization of the ~~reaction of~~ halo~~genous~~id arylation reaction ~~[halogenoarylation]~~ for the synthesis of aromatic amino acids." Mos, 1957. 18 pp 21 cm. (Mos State Order of Lenin and Order of Labor Red Banner Univ im M.V. Lomonosov). ~~XXX~~ 110 copies. ( KL, 23-57, 109).

-~~25~~-24

YURKEVICH, A.M.

79-2-31/58

**AUTHORS:** Dombrovskiy, A. V.; Terent'yev, A. P; Yurkevich, A. M.

**TITLE:** Halogenoarylation of Unsaturated Compounds with Aromatic Diazo-Compounds. Part 4. Synthesis of beta-Arylalkyl Carboxylic Acids. (Galoidarilirovaniye nepredel'nykh soyedineniy aromaticheskimi diazosoyedineniyami. IV. Sintez beta-arilalkilkarbonovykh kislot).

**PERIODICAL:** Zhurnal Obshchey Khimii, 1957, vol 27, No 2, pp. 419-421 (U.S.S.R.)

**ABSTRACT:** This report describes the results obtained from the conversion of halogenophenylation and halogenonaphthylation products into corresponding beta-substituted propionic and isobutyric acids, analogues of which found application in the role of plant stimulants. Experiments showed that methylacrylate and methylmethacrylate react with diazonium salts in an aqueous-acetone solution in the presence of copper dichloride forming methyl esters of alpha-chloro-beta-arylpropionic and alpha-chloro-beta-arylisobutyric acid (methyl-alpha-chloro-beta-arylpropionate and methyl-alpha-chloro-beta-arylisobutyrate). Reduction of alpha-chloro-beta-phenylpropionitrile and methyl-alpha-chloro-beta-phenylisobutyrate with

Card 1/2

79-2-31/58

Halogenoarylation of Unsaturated Compounds with Aromatic Diazo-Compounds.

Zn in ice cold acetic acid produced good yields of beta-phenylpropionic, beta-phenylisobutyric, 2-(alpha-naphthyl)- and 2-(beta-naphthyl)-propionic acids.

1 table. There are 8 references, of which 2 are Slavic

ASSOCIATION: Moscow State University

PRESENTED BY:

SUBMITTED: February 27, 1956

AVAILABLE: Library of Congress

Card 2/2

YURKEVICH, A.M.

AUTHORS: Dombrovskiy, A. V., Yurkevich, A. M., Terent'yev, A. P. 79-11-29/56

TITLE: Haloidarylation of Unsaturated Compounds With Aromatic Diazocompounds (Galoidarilirovaniye nepredel'nykh soyedineniy aromaticheskimi diazosoyedineniyami).
VII. Reactions With Acrolein and Crotonaldehyde
(VII. Reaktsii s akroleinom i krotonovym al'degidom).

PERIODICAL: Zhurnal Obshchey Khimii, 1957, Vol. 27, Nr 11, pp. 3047-3050 (USSR)

ABSTRACT: The only example of a reaction between unsaturated aldehydes and aromatic diazosalts is found in the paper by Meerwein and collaborators. In the systematic investigation of the conversions of the unsaturated compounds with aromatic diazocompounds the authors investigated the hitherto not described reaction between chloro- and bromodiazone ($C_6H_5N_2X$) and acrolein, as well as crotonaldehyde. In an aqueous acetone solution in the presence of copper chloride these aldehydes join with the phenyl radical and one haloid atom the annexing taking place on the double bond $> C = C <$ The yields in the end products are largely dependent on the

Card 1/2

Haloidarylation of Unsaturated Compounds With Aromatic Diazocompounds. VII. Reactions With Acrolein and Crotonaldehyde 79-11-29/56

temperature used in the haloidphenylarylation and on the medium. The best yields are obtained when the aldehydes are subjected to the action of neutral solutions of diazosalts, with an addition of calcium hydroxide to the reaction mixture. Thus the haloidphenylarylation of acrolein and crotonaldehyde was described. Synthesized were the earlier unknown α-chloro- and α-bromo-β-phenylpropionaldehydes, α-chloro-β-phenylbutyric acid aldehyde, diethylacetal-α-chloro-β-phenylpropionaldehyde and α-chloro-β-phenylbutyric acid aldehyde. There are 8 references, 3 of which are Slavic.

ASSOCIATION: **Moscow State University** (Moskovskiy gosudarstvennyy universitet)

SUBMITTED: October 25, 1956

AVAILABLE: Library of Congress

Card 2/2

1. Acroleins - Chemical reactions 2. Crotonaldehydes - Chemical reactions 3. Copper chloride catalyst - Applications

79-12-33/43

AUTHORS: Dombrovskiy, A. V., Yurkevich, A. M., Terent'yev, A. P.

TITLE: Halide Arylation of **Unsaturated** Compounds With Aromatic Diazo-compounds (Galoidoarilirovaniye **nepredel'nykh** soyedineniy aromaticheskimi diazosoyedineniyami). IX. Synthesis of the α - Halide - β - Arylpropionic - and of the β - Arylisobutyric Acid(IX.Sintez - α - galoid - β - arilpropionovykh i β - arilizomaslyanykh kislot).

PERIODICAL: Zhurnal Obshchey Khimii, 1957, Vol. 27, Nr 12, pp. 3346-3349 (USSR)

ABSTRACT: In the course of experiments for the purpose of conducting a direct synthesis of the phenylanaline and of its derivatives with an utilisation of the halide arylation reaction of the acrylnitrile, the authors developed a synthesising method of the α- halide - β - arylpropionic acids by means of a hydrolysis of the α - halide - β - arylpropionic nitriles, using a mixture of formic acid and hydrochloric acid. The synthesis known up to now of α - halide - β - arylpropionic acids with the help of nitrous acid and hydrochloric acid is not applicable to the production of aminoacids. The method proposed here for the hydrolysis of the

Card 1/3

Halide Arylation of not Saturated Compounds With Aromatic Diazo - compounds. IX. Synthesis of the α - Halide - β - Arylpropionic - and of the β - arylisobutyric Acid

79-12-33/43

α - halide - β - arylpropionic nitriles with the help of the aforesaid mixture of acids leads quickly to the formation of the corresponding α - halide acids with an almost quantitative rate of production. The heating of the nitrile chloride was conducted with the three to five fold amount of 85 % formic acid and of concentrated hydrochloric acid. By this means, the following acids were obtained: α - chloro - β - phenyl -, α - chloro - β - π - methoxy - phenyl -, α - chloro - β - π - chloro phenyl, α - chloro - β - (2,4 - di-chloro phenyl -, α - chloro - β - (π - bromo phenyl) -, α - chloro - β - (p nitrophenyl) - and α - bromo - β - phenylpropionic acid (see formulae). Subject to identical conditions α - chloro - β - phenyl - and α - chloro - β - (π - nitrophenyl) - isobutyric acid were synthesized from the corresponding methylester.

Card 2/3

79-12-33/43

Halyde Arylation of **Unsaturated** Compounds With Aromatic Diazo - compounds. IX. Synthesis of the α - Halide - β - Arylpropionic - and of the β - Arylisobutyric Acid

There are 9 references, 4 of which are Slavic.

ASSOCIATION: **Moscow State University** (Moskovskiy gosudarstvennyy universitet).

SUBMITTED: November 26, 1956

AVAILABLE: Library of Congress

1. α-Halide-β-arylpropionic acids - Synthesis
2. β-Arylisobutyric acids - Synthesis
3. Cyclic compounds - Halide arylation

Card 3/3

YURKEVICH, A.M.

79-1-47/63

AUTHORS: Yurkevich, A. M., Dombrovskiy, A. V., Terent'yev, A. P.

TITLE: The Haloidarylation of Unsaturated Compounds With Aromatic Diazo Compounds (Galoidoarilirovaniye nepredel'nykh soyedineniy aromaticheskimi diazosoyedineniyami) X. The Synthesis of DL-Phenylalanine and Its Homologues (X. Sintez DL-fenilalanina i yego gomologov)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol.28, Nr 1, pp.227-230 (USSR)

ABSTRACT: In connection with the haloidarylation reaction of the arylic acid derivatives the authors had earlier worked out a preparative method for the synthesis of α-haloid-β-arylpropionic and β-aryl-isobutyric acids by saponification of the nitriles and esters of this acid with the aid of a mixture of formic and hydrochloric acid. This made it possible to find a general method for the synthesis of DL-β-phenylalanine and its homologues from acrylnitrile and methylmetacrylate (see the process of reaction). On direct action of ammonia and amines upon α-haloid-β-propionnitriles as a rule no aminonitriles are formed, with the exception of α-chloro-β-phenylpropion-

Card 1/3

79-1-47/63

The Haloidarylation of Unsaturated Compounds With Aromatic Diazo Compounds
X. The Synthesis of DL-Phenylalanine and Its Homologues

nitrile which yielded N, β-diphenylalanine by the influence of aniline and by subsequent saponification of aminonitrile with caustic potash. On heating of α-chloro-β-phenylpropionitrile and α-chloro-β-(p-nitrophenyl)-propionnitrile with urotropine in dioxane and by further splitting of the urotropine complex with alcoholic hydrogen chloride the authors obtained hydrochlorides of phenylalanine- and p-nitrophenylalanine-ethylester. In order to find a better method for the synthesis of amino acids the α-haloid-β-arylpropionic acids were according to one of the three methods subjected to amination: 1) By conversion with a concentrated aqueous ammonia solution, 2) by conversion with liquid ammonia and finally 3) by conversion with urotropine. In this manner the authors synthesized phenylalanine (50-90 %), p-methoxyphenylalanine, p-chlorophenylalanine, 2,4-dichlorophenylalanine and p-bromophenylalanine. Tyrosine with a 90% yield was obtained from p-methoxyphenylalanine. The method with liquid ammonia gives the best yields, the reaction velocity being even higher than with the use of aqueous solutions. There are 17 references, 5 of which are Slavic.

Card 2/3

The Haloidarylation of Unsaturated Compounds With Aromatic Diazo Compounds. 79-1-47/63
X. The Synthesis of DL-Phenylalanine and Its Homologues

ASSOCIATION: **Moscow State University**
(Moskovskiy gosudarstvennyy universitet)

SUBMITTED: November 26, 1956

AVAILABLE: Library of Congress

Card 3/3 **1. Chemistry 2. Cyclic compounds-Chemical reactions**

YURKEVICH, A. M., BEREZOVSKIY, V. M., KRIVOSHEINA, N. K., (USSR)

"Investigation of the Mechanism of Synthesis of Folic Acid and Some Simple Pterins."

Report presented at the 5th Int'l. Biochemistry Congress, Moscow, 10-16 Aug. 1961.

BEREZOVSKIY, V.M.; YURKEVICH, A.M.

Alloxazine and isoalloxazine series. Part 6: Synthesis of quinoxalines, potential precursors of alloxazines. Zhur. ob. khim. 31 no. 11:3775-3781 N '61. (MIRA 14:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy vitaminnyy institut.
(Quinoxaline) (Alloxazine)

BEREZOVSKIY, V.M.; YURKEVICH, A.M.; KRIVOSHEINA, I.K.

Chromatographic and electrophoretic study of the formation reaction of folic acid and some simple pterins. Zhur.ob.khim. 31 no.8:2782-2786 Ag '61. (MIRA 14:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy vitaminnyy institut.
(Folic acid) (Pterins)

BEREZOVSKIY, V.M.; YURKEVICH, A.M.

Improved synthesis of adenine. Zhur.ob.khim. 32 no.5:1655-1659
My '62. (MIRA 15:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy vitaminnyy institut.
(Adenine)

YURKEVICH, A.M.; BORODULINA, V.I.; PREOBRAZHENSKIY, N.A.

Spectrophotometric study of the reaction of cyanocobalamine with amino acids. Zhur. ob. khim. 35 no.1:85-89 Ja '65. (MIRA 18:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy vitaminnyy institut.

YURKEVICH, A.M.; KOLOKINA, I.I.; PREOBRACHENSKIY, N.A.

2',3'-Phenylboric ester of adenosine in the synthesis of adenosine-5-monophosphate. Dokl. AN SSSR 164 no.4:828-830 O '65. (MIRA 18:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy vitaminnyy institut. Submitted March 30, 1965.

L 31803-66 EWT(m)/EWP(j) RM

ACC NR: AP6021670 SOURCE CODE: UR/0079/66/036/003/0442/0447

AUTHOR: Kolodkina, I. I.; Yurkovich, A. M.; Preobrazhenskiy, N. A.

27

B

ORG: All-Union Scientific Research Vitamin Institute (Vsesoyuznyy nauchno-issledovatel'skiy vitaminnyy institut)

TITLE: Adenosine phosphates and their derivatives

SOURCE: Zhurnal obshchey khimii, v. 36, no. 3, 1966, 442-447

TOPIC TAGS: phosphate, nonmetallic organic derivative, phosphorylation, chemical synthesis, ion exchange resin/Dowes-1 ion exchange resin, Sephadex A-25 ion exchange resin

ABSTRACT: The phosphorylation of derivatives of adenosine and its phosphates was studied for further development of preparative syntheses of these compounds. Adenosine 2',3'-O-isopropylidene-5'-phosphomorpholide, adenosine-5'-monophosphate, and adenosine-2'(3'),5'-diphosphate were synthesized, and methods of their purification and isolation were studied. $P^1$-Diphenyl-$P^2$-morpholide pyrophosphochloride and -morpholide phosphodichloride were used as phosphorylating agents. Ion-exchange resins were used for isolation and purification: Dowex-1 and Sephadex A-25. Orig. art. has: 4 figures and 1 table. [JPRS]

SUB CODE: 07 / SUBM DATE: 23Jan65 / ORIG REF: 001 / OTH REF: 011

Card 1/1 LS

UDC: 547.962.32

DANILIN, V.P., kandidat tekhnicheskikh nauk, dotsent; YURKEVICH, A.P.,
kandidat tekhnicheskikh nauk, dotsent.

Book review. (Aeronautical gyroscope instruments." V.A. Pavlov. Reviewed by V.P. Danilin, A.P. IUrkevich.) Priborstroenie no.4: 32-p.3 of cover Ap '56. (MLRA 9:8)
(Aeronautical instruments) (Gyroscope) (Pavlov, V.A.)

Yurkevich, A.P.

1(1) PHASE I BOOK EXPLOITATION SOV/5491
SOV/11-M-109

Moscow. Aviatsionnyy institut imeni Sergo Ordzhonikidze

Aviatsionnoye priborostroyeniye i avtomatika; sbornik statey (Instrument Making and Automatic Systems in Aviation; Collection of Articles) Moscow, Oborongiz, 1959. 147 p. (Series: Its Trudy, vyp. 109) Errata slip inserted. 5,200 copies printed.

Sponsoring Agency: USSR. Ministerstvo vysshego obrazovaniya.

Ed.: B. A. Ryabov, Doctor of Technical Sciences, Professor; Ed. of Publishing House: N. A. Gortsuyeva; Tech. Ed.: L. A. Garnukhina; Managing Ed: A. S. Zaymovskaya, Engineer.

PURPOSE: This book is intended for scientific and technical personnel in the field of instrument making and automation, and for students of technical schools of higher education.

COVERAGE: The book is a collection of 10 articles describing certain aspects of aircraft automatic control and regulation and aviation instrument making. The articles consist of parts of the authors' dissertations or describe results of scientific research work of the Department of Aircraft Instruments and Automatic Systems. of the Moscow Aviation Institute. References are given at the end of some articles.

Vorchenko, N.Ya., and A. P. Yurkevich, Candidates of Technical Sciences. 70
Analysis of Kinematic Temperature Compensation
The authors present a method of compensating for temperature errors in navigational instruments with linear and nonlinear characteristics of membrane deflections.

Yurkevich, A. P., Candidate of Technical Sciences ; and Engineer Yu. P. 79
Anan'yev. Methods of Measuring Velocity of an Airflow
The authors review Soviet and foreign literature on variable airflow measuring methods.

Vertinov, A. L., and S. R. Mizurin, Candidates of Technical Science. 94
Precise Regulation of DC Motor Speed
The authors have developed a method of controlling synchronous rotation speeds of d-c motors which has a high stabilization accuracy.

Karogodin, V. M., Candidate of Technical Sciences. A Problem of Fighter 121
Aircraft Dynamics
The author establishes and solves the differential equation of fighter aircraft motion, finds the law of this motion on the trajectory, computes loads acting on the fighter aircraft, and determines the method of its control.

Karagodin, V. M., Candidate of Technical Sciences. A Nonlinear Problem 136
in the Vibration Theory
The author considers a mechanical system with one degree of freedom. He studies conservative systems with forces depending on coordinates and velocities. Selfoscillating systems and conservative systems with forces depending only on coordinates are not considered.

4

BRASLAVSKIY, D.A.; VOVCHENKO, N.Ya.; YURKEVICH, A.P.; DENISOV, V.G.; RYABOV, B.A., prof., doktor tekhn.nauk, red.; GRIGORASH, K.I., izdat.red.; ORESHKINA, V.I., tekhn.red.

[Manual for designing aeronautical instruments] Posobie po proektirovaniiu aviatsionnykh priborov. Pod red. B.A.Riabova. Moskva, Gos.nauchno-tekhn.izd-vo Oborongiz. No.1. [Electromechanical instruments] Elektromekhanicheskie pribory. 1960. 94 p. (MIRA 13:7)

1. Moscow. Aviatsionnyy institut imeni Sergo Ordzhonikidze. (Aeronautical instruments)

YURKEVICH, A.P.
p.2,3

PHASE I BOOK EXPLOITATION SOV/4274
SOV/11-S-120

Moscow. Aviatsionnyy institut imeni Sergo Ordzhonikidze

Voprosy rascheta aviatsionnykh priborov i sistem upravleniya; sbornik statey (Problems in the Design of Aviation Instruments and Control Systems; Collection of Articles) Moscow, Oborongiz, 1960. 157 p. (Series: Its: Trudy, vyp. 120). Errata slip inserted. 3,650 copies printed.

Sponsoring Agency: RSFSR. Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya.

Ed. (Title page): B. A. Ryabov, Doctor of Technical Sciences, Professor; Ed. (Inside book): V. M. Tokar'; Tech. Ed.: V. I. Oreshkina; Managing Ed.: A. S. Zaymovskaya, Engineer.

PURPOSE: This book is intended for engineers and technicians working in the planning and design of devices and control systems and can also be used by students in the electromechanical departments of schools of higher technical education.

Card 1/3

Problems in the Design of Aviation (Cont.) SOV/4274

COVERAGE: The book consists of articles containing results achieved by the Department of Aeronautical Devices and Automatic Equipment of the Moscow Aviation Institute imeni Ordzhonikidze in the development of aeronautical devices and automatic equipment. The book covers the following: design of a transformer for an extremal regulator and telemetering systems, the problems of the dynamics of linear and nonlinear control systems, modeling, membrane origin, and the design of devices for measuring flying altitude and the revolutions of engines. No personalities are mentioned. References are found at the end of some articles.

TABLE OF CONTENTS:

Foreword 3

Yurkevich, A.P. (Cand Tech Sci*) Dynamic Transformer of the Input Signal of an Extremal Regulator 5

Repnikov, A.V. On the Approximate Determination of Self-Oscillations in Automatic Control Relay Systems 17

Mityushin, F.F. Relay-Contact Systems With Delay and Nonlinear Derivative Action 30

Ryabov, B.A. Evaluation of Small Variations of the Roots of the Characteristic Equation of a Linear Control System 36

Card 2/3

* MIRA Card - same source

Romanov, M.I., Ye.V. Armenskiy. On a Method of Modeling the Drive Engines of Low-Power Alternating Current Servosystems 42

Orlov, V.A. Multichannel Telemetering Device for Transmitting Measurements From a Moving Object to a Recording Device 59

Pomykayev, I.I. Radiostatoscopic Method of Measuring Flying Altitude 81

Yurkevich, A.P., and N.Ya. Vovchenko. Magnetoinduction Tachometer With Adjustable Sensing Device 111

Dmitrochenko, L.A. Tachometer With Temperature Reading Corrections 122

Izhevskaya, V.M. Determination of Dynamic Errors of Membrane Devices Having a Nonlinear Elastic Element 130

Popelyash, Ye.N. On the Operation of Membranes in Power Systems 138

AVAILABLE: Library of Congress

AC/rn/fal
9-22-60

Card 3/3

S/194/61/000/010/006/082
D256/D301

AUTHORS: Yurkevich, A.P. and Vovchenko, N.Ya.

TITLE: A magnetic-induction tachometer with adjustable sensitivity

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 10, 1961, 21, abstract 10 A168 (Tr. Mosk. aviats. in-ta, 1960, no. 120, 111-121)

TEXT: The sensing element of the tachometer consists of frames with currents induced by rotation in a magnetic field, the counter-balancing of the created torque by means of a spring providing the possibility of measuring the corresponding rate of rotation with a higher accuracy of readings at a given working range. 11 figures. [Abstracter's note: Complete translation]

✓

Card 1/1

88339

S/024/60/000/006/005/015
E140/E463

13.2000

AUTHOR: Yurkevich, A.P. (Moscow)

9

TITLE: On the Dynamics of an Extremal Control System With Storage in the Presence of Low Frequency External Perturbations

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Energetika i avtomatika, 1960, No.6, pp.123-132

TEXT: The article considers the dynamics of an optimizing control using a signum relay which reverses the direction of motion when the value of the controlled parameter reaches a certain deviation from the last extremal value. Further, the same system is examined with the addition of a reversing switch which operates after a fixed time delay (the time being reset to zero at each operation of the signum relay). If the time delay is small, the switch reverses frequently and the search process is slow. As the switching time increases, the search time for the optimum decreases. For a sufficiently long switching time, the time switch ceases to operate after the extremum has been found since reversal of the system in a limit cycle is obtained only by the action of the

Card 1/3

88339

S/024/60/000/006/005/015
E140/E463

On the Dynamics of an Extremal Control System With Storage in the Presence of Low Frequency External Perturbations

signum relay which blocks the time switch. At the same time, if the signum relay fails to operate for any reason, the time switch comes into action and limits possible wandering of the system. Finally, the system is analysed with the addition of a "dynamic input signal transformer", which is equivalent to an ordinary RC differentiating network. The system parameters as functions of the dynamic signal converter time constant display minima, so that an optimal time constant exists. In the limit as the time constant τ approaches infinity, the dynamic converter degenerates into a proportional element which in the presence of perturbations substantially reduces the precision of regulation. At the opposite extreme as τ decreases without limit, the dynamic converter ceases to pass the fundamental signal frequency corresponding to the search motion of the system, which also reduces the control precision. The system containing a dynamic input signal converter in the presence of low frequency harmonic external disturbances has substantially higher control precision than
Card 2/3

88339

S/024/60/000/006/005/015
E140/E463

On the Dynamics of an Extremal Control System With Storage in the Presence of Low Frequency External Perturbations

one without. There are 14 figures and 6 Soviet references.

SUBMITTED: April 27, 1960

Card 3/3

84700

13.2000

S/020/60/133/006/002/016
B019/B054

AUTHOR: Yurkevich, A. P.

TITLE: Processes of Extremum Regulation With Dynamic Conversion and Storage of the Input Signal in the Presence of Disturbances

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 6, pp. 1307-1310

TEXT: The improvement of accuracy in searching the function extremum under the action of external low-frequency disturbances is indicated as the most important problem in the further development of systems of extremum regulation. Besides well-known methods such as a suitable change of the search movement with performance of computing operations, introduction of a correction according to external disturbances, the problem can be solved in some cases by dynamic conversion of the input signal. This correction is made in a special unit inserted between object and extremum regulator by which only sufficiently fast changing signals are transmitted. The transfer functions (1) and (2) for dynamic converters are

Card 1/3

84700

Processes of Extremum Regulation With Dynamic Conversion and Storage of the Input Signal in the Presence of Disturbances

S/020/60/133/006/002/016
B019/B054

written down. A converter with the transfer function (1) does practically not transmit any low-frequency signals, and one with (2) has a transmission band in the medium-frequency range. Besides, a dynamic converter can improve the sensitivity of the regulator, and reduce the influence of noise. The author studies the mode of operation of a system of extremum regulation with signum relay and with storage, which has a zone of insensitiveness. The object controlled is assumed to be inertialess, and the velocity of the final element to be constant. Fig. 1 shows the parabolic characteristic of the object. The author investigates the effect of external disturbances with special consideration of disturbances which are a quadratic function of time. He determines the parameters of the periodic cycle by a method described before (Refs. 1, 7). Further, he investigates a regulating process in the presence of a commutator which reverses the system in the time $t_k$ and has a reset in the reverse operation of the signum relay. The author again develops formulas for determining the parameters of the periodic cycle. Fig. 2 represents the calculation results obtained with formulas (8), (10), and (11). Hence, it appears that the introduction of

Card 2/3

84700

Processes of Extremum Regulation With Dynamic Conversion and Storage of the Input Signal in the Presence of Disturbances

S/020/60/133/006/002/016
B019/B054

a commutator considerably improves the accuracy of regulation in the presence of a zone of insensitiveness. If no commutator is available, the system may even become inoperative under certain conditions. Finally, some special cases are studied with the aid of Lamerey (Lamereille?) diagrams. There are 3 figures and 12 Soviet references.

PRESENTED: March 28, 1960, by N. N. Bogolyubov, Academician

SUBMITTED: March 24, 1960

✓

Card 3/3

SOV/5650

PHASE I BOOK EXPLOITATION

Yurkevich, A. P., and N. Ya. Vovchenko

Raschet elektricheskikh izmeritel'nykh ustroystv i sistem s silovoy kompensatsiyey (Calculation of Electrical Measuring Devices and Systems With Power Compensation) Moscow, Oborongiz, 1961. 128 p. 10,100 copies printed.

Sponsoring Agency: Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya RSFSR. Moskovskiy ordena Lenina aviatsionnyy institut imeni Sergo Ordzhonikidze.

Ed. (Title page): B.A. Ryabov, Doctor of Technical Sciences, Professor; Ed. of Publishing House: K. I. Grigorash; Tech. Ed.: V.I. Oreshkina; Managing Ed.: A.S. Zaymovskaya, Engineer.

PURPOSE: This book is intended as a teaching aid for students working on term or degree projects in instrument-making and automation divisions of aviation schools of higher education. Certain sections of the book may be of interest to industrial technical personnel.

Card 1/4

---

F

Ch

2

3. 5

4. 5

devices 6

5. ristics of elementary 22

compensation system with 34

53

Card 2/4

S/588/61/000/004/002/011
D234/D303

16,8000

AUTHOR: Yurkevich, A.P.

TITLE: On extremum control of processes of small inertia with application of a dynamic converter of the input signal

SOURCE: Avtomaticheskoye upravleniye i vychislitel'naya tekhnika, no. 4, Moscow 1961, 50 - 92

TEXT: The subjects treated are dynamic conversion of the input signal; operation of an extremum controller with a dynamic converter in absence of disturbances; equations of the limiting cycle of the system in the domain of the extremum; effect of external disturbances; increase of the sensitivity of the controller; a device for automatic cut-out of the controller. There are 21 figures and 10 Soviet-bloc references.

VB

Card 1/1

S/024/61/000/006/004/[illegible]
E140/E335

16.8000

**AUTHOR:** Yurkevich, A.P. (Moscow)

**TITLE:** On the stability of extremal control systems with proportional control of input rate

**PERIODICAL:** Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Energetika i avtomatika, no. 6, 1961, 30 - 41

**TEXT:** The article considers a system first described by C.S. Draper and I.T. Li (Ref. 1: Principals of optimalizing control systems and application to internal combustion engine. ASME, New York, September, 1951). Previous studies of such systems have neglected stability questions in the presence of monotonic or low-frequency external disturbances, which is the subject of the present article. It is assumed that there is an external disturbance which shifts the extremal characteristic along the y-axis at a constant rate. The regulated process is assumed in the form of two series-connected circuits, a first-order linear circuit, taking into account the process inertia, and a nonlinear element, having a quadratic characteristic. The

√C

Card 1/3

S/024/61/000/006/004/019
E140/E335

On the stability of ....

method of solution uses the phase plane and the method of isoclines. It is found that the system may diverge from the extremum under certain conditions, unless a systematic direction switching is employed. The apparatus of point transformations is introduced here to analyze the processes occurring in the present of switching. An analytical expression is derived, valid between two successive switching instants; this expression is transcendental and is solved graphically. It is found that the system with switching is not only highly stable but highly accurate even in the presence of large disturbances, the precision increasing with the switching frequency. In conclusion, a variant of the system is discussed in which, as dy/dx decreases to 0 the velocity x decreases to a certain minimum value $v_{x\,min}$. Such a system is stable even without switching, which, however improves its operation. This last system is not examined in any detail.

Card 2/3

On the stability of ....

S/024/61/000/006/004/019
E140/E335

There are 12 figures and 8 references: 7 Soviet-bloc and 1 non-Soviet-bloc (quoted in text).

SUBMITTED: July 28, 1960

Vc

Card 3/3

S/103/61/022/002/004/015
B104/B201

16.9500 (1031, 1121, 1132)

AUTHOR: Yurkevich, A. P. (Moscow)

TITLE: Transition processes in extremum control systems with a dynamic sensitive element

PERIODICAL: Avtomatika i telemekhanika, v. 22, no. 2, 1961, 176-184

TEXT: In extremum control systems, positive results are obtained by the use of dynamic sensitive elements which permit the passage of only such alternating input signals as are sufficiently fast. They improve the control qualities and reduce the effect of low-frequency disturbances. A study has now been made of the motion of a system with large initial deviations and taking the instrument lag into account. Fig. 1 shows block diagrams of extremum control systems with dynamic converters of the input signal. These systems are operated by a procedure suggested by V. V. Kazakevich (Ref. 4), consisting in that a signal composed of the output signal of the object and of the derivative of this output signal is provided for the extremum regulator. If the signal z (Fig. 1б) is a difference $z = y - y_K$, where $y = K_{\text{П}} y_1$ and $y_K = y/(p\tau + 1)$,

Card 1/5

89173

$W(p) = z/y = p\tau/(p\tau + 1)$ will then hold for the transfer function. In these relations, $K_{\text{п}}$ is the transfer factor of the pickup, and $\tau$ is its time constant. The static characteristic is assumed to have the form $y = -K_x x^2$. The scanning process of such a system is discussed with the aid of Fig. 2. As may be seen, z displays an initial rise, followed by a drop, and at point 2 reaches the zone $z_H$ of insensitivity. Here, a reversion of the system takes place. It may be seen that length and number of scanning operations depend upon the insensitivity zone $z_H$. For $z_H = 0$ the search for the extremum is made with an infinite number of infinitely small scanning operations. The author has shown in one of his previous papers that the determination of the parameters of the transition processes of the system and of the boundary cycles is appreciably simplified by the introduction of phase planes of more than one sheet with the reduced coordinates $\alpha = x/V_x\tau$ and $\beta = \dot{z}/2K_xV_x^2\tau$. Fig. 3 is a graph showing a scanning process in this phase plane. A thorough study made in this phase plane shows that the scanning rate increases with the system approaching the maximum of the function. The scanning rate is reduced by outer disturbances which raise the maximum of the function. Also the positive effect of a commutator, which reverses the system at regular time intervals, is shown for this case. Finally, Fig. 9 shows the scanning process when taking a lag into account. As may be seen, the resulting boundary cycle has a relatively large amplitude. There are 9 figures and 4 Soviet-bloc references.

SUBMITTED: June 14, 1960

Legend to Fig. 1:
Block diagram of extremum control systems of dynamic input signal converters. ЭЭ is the extremum element, ЭР the extremum regulator.

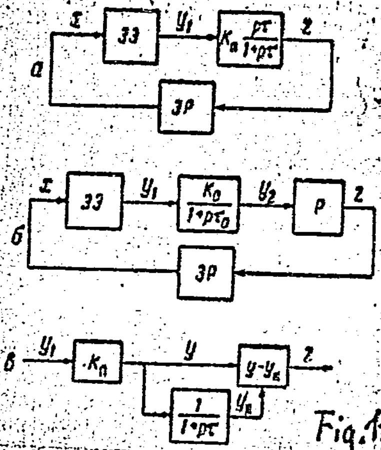


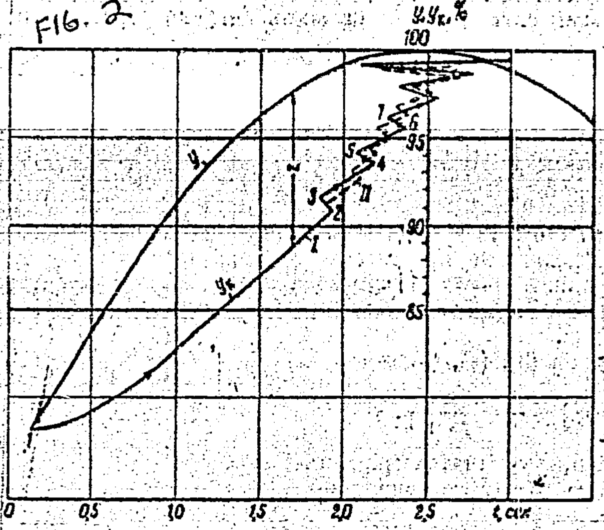
Fig. 1

89173

Transition processes in extremum...

S/103/61/022/002/004/015
B104/B201

FIG. 2



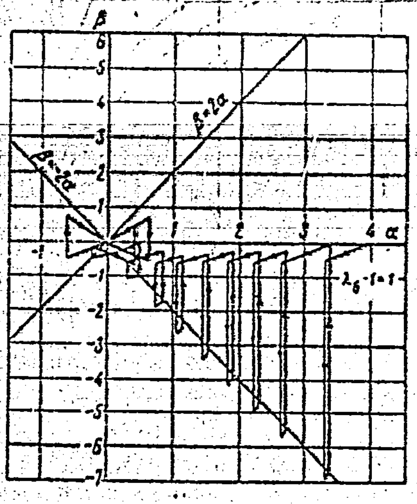


Fig. 3

Card 4/5

Transition processes in extremum...

S/103/61/022/002/004/015
B104/B201

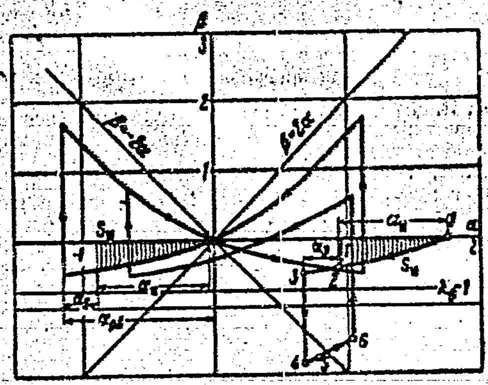


Fig. 9

Card 5/5

68399

S/020/61/136/004/005/026
B019/B056

16.9500 (1031,1121,1132)

AUTHORS: Kazakevich, V. V. and Yurkevich, A. P.

TITLE: Improvement of the Extremum Control of Inert Objects in the Presence of Disturbances

PERIODICAL: Doklady Akademii nauk SSSR, 1961, Vol. 136, No. 4, pp. 783 - 786

TEXT: In a previous paper (Ref.2), V. V. Kazakevich described a method for extremum control, which permits avoiding the action of the inertia of the object in the absence of dynamic terms in the object. In this system, a certain combination of signals is fed to the input according to the derivative of the quantity to be regulated. In the case of objects with low-frequency disturbances, this system offers special advantages, as the disturbances are filtered out. However, in the case of considerable disturbances, a considerably varying level of the extremum of the function, and, in the case of moderately fast cross beams of the final control organ, scanning may be considerably disturbed. The authors first confine themselves to control systems of first-order objects; the extremum element

Card 1/4

88399

Improvement of the Extremum Control of Inert Objects in the Presence of Disturbances S/020/61/136/004/005/026 B019/B056

is characterized by the relation $y_1 = -K_x x^2$ (1) is assumed, where x and $y_1$ are the input and output coordinates of the extremum element. It is further assumed that $|\dot{x}| = V_x = \text{const}$, and that between the inputs of the objects $y_1$ and $y_2$ the relation $y_2 = k_o y_1/(p\tau_o + 1)$ holds, where $k_o$ and $\tau_o$ are constants. In the control method developed in Ref.2, the signal $z = K_D\dot{y}_2$ is fed to the input of the extremum regulator if nonlinear terms are not taken into account; in this case, the following relation holds with $y_1K_DK_o/\tau = y$; $z = p\tau_o y/(p\tau_o + 1)$ (3). The symbols used here have been taken from Ref.2 and are not defined more closely. The transition processes in the system investigated here are described by a system of equations that is analogous to that describing the transition processes in an inertialess object with a dynamic input signal converter. Such systems have already been studied by A. P. Yurkevich (Refs. 3,4). Some results of these investigations are discussed, and, following this, it is assumed that the external disturbances are a linear function of time. (1) is then replaced by $y_1 = -K_x x^2 + K_1 t$ (4). As may be seen from a graphical

88399

Improvement of the Extremum Control of Inert Objects in the Presence of Disturbances

S/020/61/136/004/005/026
B019/B056

representation of the control process, an oscillation with decreasing amplitude occurs near the extremum, the amplitude approaching a limit. Considerable disturbances are then briefly dealt with, which are a quadratic function of time. It is shown that in this case considerable deviations may occur, and it is noted that by a decrease of time, in the case of both linear and quadratic disturbances, the transition process may, in general, be shortened, and the amplitude may be decreased. It is then shown that by using a combined converter system for the input signal, the quality of extremum control is improved. The dynamic converter, in the case of an optimum time constant, suppresses the undesired influence of low-frequency disturbances, and the negative feedback of the insensitive range increases the accuracy of control near the extremum during the action of monotonic external disturbances. For the purpose of determining the parameters of the transition processes and of the limit cycles of the system, the construction of phase trajectories in multi-folium surfaces is of advantage. For an ideal case, in which instrument errors are excluded and the action of the inertia of the object may be neglected, the construction of phase trajectories is discussed in detail. There are 3 figures and 6 Soviet references.

Card 3/4

88399

Improvement of the Extremum Control of Inert Objects in the Presence of Disturbances

S/020/61/136/004/005/026
B019/B056

ASSOCIATION: Moskovskiy aviatsionnyy institut im. Sergo Ordzhonikidze (Moscow Aviation Institute imeni Sergo Ordzhonikidze)

PRESENTED: July 26, 1960, by N. N. Bogolyubov, Academician

SUBMITTED: July 12, 1960

Card 4/4

3

YURKEVICH, A.P.

33443
S/119/62/000/001/001/011
D201/D302

9,6000 (1040,1139,1159)

AUTHORS: Grishin, A.I., Kavalerov, G.I., Nize, V.E., Orshanskiy D.L., Pavlenko, V.A., Sotskov, B.S., and Yurkevich, A.P.

TITLE: Recent trends in the development of instrumentation

SOURCE: Priborostroyeniye, no. 1, 1962, 1 - 5

TEXT: A survey of recent trends in the development of instrumentation within the Soviet-bloc is given. The main objective is the standardization of instruments with the aim of simplifying the automation of industrial processes. A group of new temperature gauges is based on the dependence of gas viscosity on temperature. Another class of gauges is based on the temperature change of a plate resistance, in conjunction with a compensating plate and an electromagnetic circuit. Efforts are made to utilize the Austin effect. For high temperature operation (above 2000°C), graphite p-n junction thermocouples have been developed. New flow gauges have been produced for the petroleum industry. Several interchangeable high-

Card 1/4

3

33448
S/119/62/000/001/001/011
D201/D302

Recent trends in the development ...

accuracy feed-back devices have been developed for measuring various parameters such as pressure and vacuum gauges, strain gauges, thermometers and density meters. Nuclear resonance methods are being developed for contactless flow measurement. Ultrasonic and radio-interference methods are used for level measurements and recordings. All new types of instruments are incorporated in new automatic control systems, developed around them. In 1961, 400 types of electrical measuring instruments were in production, varying from laboratory standards to high power distributing panel instruments. High sensitivity miniature meters are under development (1 - 2 $cm^3$ volume, 5 - 10 microcamps range). The accuracy of portable instruments is being improved and their dimensions are reduced. Digital instruments, both of continuous action and sampled data types continue to find more and more applications. As far as analytical instruments are concerned, the main trend is to increase the number of methods of analysis applicable in practice, to increase the discriminating properties, sensitivity and speed of operation, to standardize the electrical output, to develop analytical instruments suitable for automatic control processes, to develop automatic and

Card 2/4

3

33448
S/119/62/000/001/001/011
D201/D302

Recent trends in the development ...

semi-automatic instruments. Those of interest are stated to be the newly developed series of standardized galvanic gas analyzers based on the micro-concentration of oxygen. Another method has been used in developing a spectrophotometric gas analyzer, with a sensitivity 10 times greater than that of the basic instrument; the instruments have ranges from 0 - 1.0 % volume of nitrogen in argon and 0 - 0.5% volume of nitrogen in helium. The range of gas analyzers based on infra-red absorption has been increased by several new instruments. Mention is made of a new instrument calibrated in 0 - 0.05 % $CO_2$, with output adapted to an automatic control system. New types of mass-spectrometers have been developed, with mass number ranges 1 to 600 ME, revolution 300 and sensitivity (argon) 0.002 %. All spectrometers are being revised to form a single range of six instruments. A radiospectrometer has been developed for the electron paramagnetic particles: Its production has started. Electrometric methods of liquid analysis and control are under development. Of interest is stated to be an industrial instrument for measuring and controlling HCl concentration in wood pulp with a varying solid to liquid phase. Other types of concentration meters were also develo-

Card 3/4

33448

Recent trends in the development ... S/119/62/000/001/001/011
D201/D302

ped, both for inorganic and organic analysis: Some are based on spectrometry. As far as the computer technique is concerned, three main trends are considered: The use of universal electronic computers for scientific and engineering calculations; the use of computers in economics and for processing large amounts of information; Application of control computers for the control and automatic control of industrial processes. In new computers the existing mercury and CRT delay lines are replaced by magnetic core memories and tubes by transistors. Modular technique is widely used together with micro-miniaturization. A new storage element has been developed based on the effect of stable internal polarization. Another interesting new component is the magnetic triode, consisting of a p-n junction, formed by alloying the intrinsic material with lead and tellurium.

Card 4/4

YURKEVICH, A. S. Doc Tech Sci

Dissertation: "Investigation into the Theory of Suspended Measuring Instruments." 20/10/50

Moscow Inst of Engineers of Geodesy, Aerial Photography and Cartography

SO Vecheryaya Moskva
Sum 71

Yurkevich, A.Ya.

RODYAKIN, N.F., dotsent; MOZHAR, B.S., kandidat meditsinskikh nauk;
YURKEVICH, A.Ya., kandidat meditsinskikh nauk; BOBROV, S.M.,
Mladshiye nauchnye sotrudniki; RUSTAYEVA, T.P.; KURBANOV; vrach;
IVANOVA, V.P., fel'dsher.

Prevention of suppurative skin diseases among cotton workers.
Vest.ven. i derm. no.4:16-18 Jl-Ag '55. (MLRA 8:12)

1. Iz Turkmenskogo nauchno-issledovatel'skogo kozhno-venerologicheskogo instituta (dir.-dotsent N.F.Rodyakin)
(PYODERMA, prevention and control,
in cotton workers)
(OCCUPATIONAL DISEASES,
pyoderma in cotton workers, prev.)

Yurkevich, A. Ya.

RODYAKIN, N.F., dotsent; MOZHAR, B.S., kand. med. nauk; YURKEVICH, A.Ya., kand. med. nauk; BOBROV, S.M., mlad. nauch. sotr; ~~RUSTAYEVA, T.P.~~, mlad. nauch. sotr; KURBANOV, A.K., trach; GADZHIYEV, M.G., vrach; VASIL'YEVA, O.A., sestra.

Use of adhesive tape caps in treating dermatomycosis under rural conditions in Turkmenia. Vest. ven. i derm. no.5:48-50 S-O '55.
(MIRA 9:1)

1. Iz Turkmenskogo nauchno-issledovatel'skogo kozhno-venerologicheskogo instituta (dir.-dotsent N. F. Rodyakin).
(SKIN, diseases,
fungus dis., ther. use of adhesive tape cap in rural conditions in Russia)
(RURAL CONDITIONS,
in Russia, ther. of fungus dis. of skin, use of adhesive tape cap)
(BANDAGING AND DRESSING,
adhesive tape cap, use in ther. of fungus dis. of skin in rural conditions in Russia)

GRIGOR'YEV, E.E.; RETNEV, V.M.; YURKEVICH, A.Ya.

Session devoted to the results of the work of the Leningrad Research Institute of Industrial Hygiene and Occupational Diseases during 1959-1960. Biul. uch. med. sov. 2 no.5:36-37 S-O '61.
(MIRA 14:11)

(INDUSTRIAL HYGIENE--CONGRESSES)

AGASHIN, Yu.A.; GRIGOR'YEV, Z.E.; KOVNATSKIY, M.A.; LEVIN, V.M.; OSIPOV, Yu.A.;
RAZUMOVSKIY, M.D.; RETNEV, V.M.; YURKEVICH, A.Ya.

Meeting devoted to the results of the work of the Leningrad Research Institute on Industrial Hygiene and Occupational Diseases for 1959-1960. Gig. i san. 26 no.8:110-114 Ag '61. (MIRA 15:4)

1. Iz Leningradskogo nauchno-issledovatel'skogo instituta gigiyeny truda i professional'nykh zabolevaniy.
(INDUSTRIAL HYGIENE)